

Technical Discussion on Surface Sampling

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DOE Limits

▼ Housekeeping

- ❖ $3.0 \mu\text{g}/100\text{cm}^2$ Non-operational periods
 - » Removable contamination

▼ Release Criteria

- ❖ $3.0 \mu\text{g}/100\text{cm}^2$ –Be Area
- ❖ $0.2 \mu\text{g}/100\text{cm}^2$ –Non-Be Area or Public
- ❖ Soil background level

DOE Recommended Method

- ▼ NIOSH 9100 Sampling Method (wet)
- ▼ Does not wish to preclude use of sampling techniques other than wipe sampling
- ▼ Should validate new technologies

Sampling Methods in Use

- ▼ NIOSH 9100 wet but dry possible
 - ❖ Whatman 41 or 541
- ▼ Linen (dry) *
- ▼ Vacuum (personal pump w/ MCEF) *
- ▼ Vacuum (personal impactor stage 4 & 5) *
- ▼ Colorimetric (Y-12 and LANL) *
- ▼ LIBS *

* Unaware of validation
of method

Concerns with Validated Method

- ▼ Rough surfaces difficult to sample
- ▼ Slow analysis method
- ▼ Dry vs wet sampling collection efficiencies not differentiated with limits or fully accessed
- ▼ Expensive
- ▼ Does not differentiate particle size

What do we need?

- ▼ Inexpensive
- ▼ Fast
- ▼ Easy to sample and analyze
- ▼ Available
- ▼ Validated method